IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1. (Original) A receiving apparatus that receives modulated signals transmitted from a transmitting apparatus that transmits different modulated signals from a plurality of antennas, said receiving apparatus comprising:

a channel fluctuation estimation section that finds a channel estimate of each modulated signal;

a partial bit demodulation section that demodulates only some bits of said modulated signal using a detection method different from likelihood detection;

a signal point reduction section that reduces candidate signal points using demodulated partial bits and said channel estimate; and

a likelihood detection section that performs likelihood detection using reduced said candidate signal points and a received baseband signal.

2. (Original) The receiving apparatus according to claim 1, further comprising a control section that controls which modulated signals' partial bits are used for candidate signal point reduction by said signal point reduction section based on reception quality of each modulated signal.

3. (Original) The receiving apparatus according to claim 1, further comprising a control section that controls how many partial bits of each modulated signal are used for candidate signal point reduction by said signal point reduction section based on reception quality of each modulated signal.

4. (Original) The receiving apparatus according to claim 1, wherein said partial bit demodulation section comprises:

a separation section that separates a received signal into modulated signals; and

a partial bit determination section that finds a candidate signal point for which a Euclidian distance from the separated modulated signal reception point is a minimum, inverts bits contained in a bit string corresponding to the found candidate signal point one at a time, searches, for each inverted bit, for a plurality of candidate signal points containing the inverted bit, detects, for each inverted bit, a minimum Euclidian distance between a reception point and said plurality of candidate signal points, detects a maximum Euclidian distance among minimum Euclidian distances of said each inverted bit, and determines 1 bit corresponding to the detected maximum Euclidian distance to be said demodulation partial bit.

5. (Original) The receiving apparatus according to claim 1, wherein said partial bit demodulation section comprises:

a separation section that separates modulated signals by performing inverse matrix computation on a channel estimation matrix using said channel estimate; and

a partial bit determination section that determines partial bits of the separated modulated signal.

6. (Original) The receiving apparatus according to claim 1, wherein said partial bit demodulation section comprises:

a separation section that separates modulated signals by performing MMSE (Minimum Mean Square Error) computation; and

a partial bit determination section that determines partial bits of a separated modulated signal.

7. (Currently Amended) A partial bit determination method comprising:

in a separation section, separating a received signal into modulated signals;

in a partial bit determination section, ~~a minimum distance candidate point detecting step of~~ detecting a candidate signal point for which a Euclidian distance from the a modulated signal reception point is a minimum;

in the partial bit determination section, ~~an inverting step of~~ inverting bits contained in a bit string corresponding to a detected candidate signal point one at a time;

in the partial bit determination section, ~~a step of~~ searching, for each inverted bit, for a plurality of candidate signal points containing an inverted bit;

in the partial bit determination section, ~~a step of~~ detecting, for each inverted bit, a minimum Euclidian distance between a reception point and said found plurality of candidate signal points;

in the partial bit determination section, ~~a step of~~ detecting a maximum Euclidian distance among minimum Euclidian distances of said each inverted bit; and

in the partial bit determination section, ~~a step of~~ determining a bit corresponding to a detected maximum Euclidian distance to be a partial bit.

8-10. (Canceled).